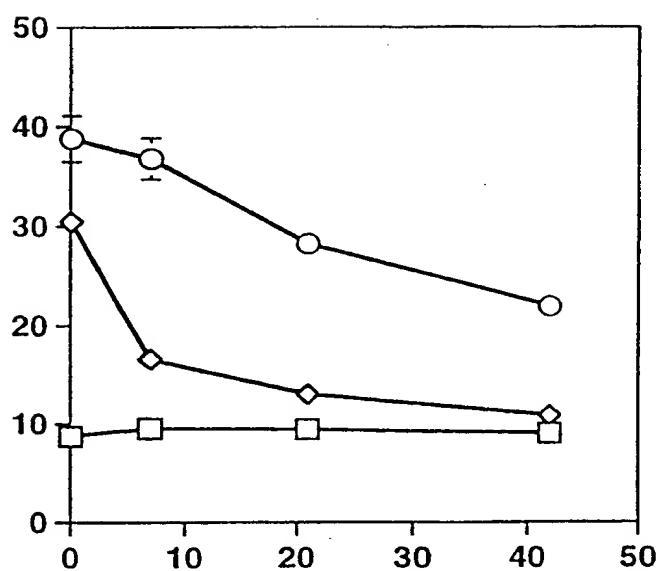


Figure 1



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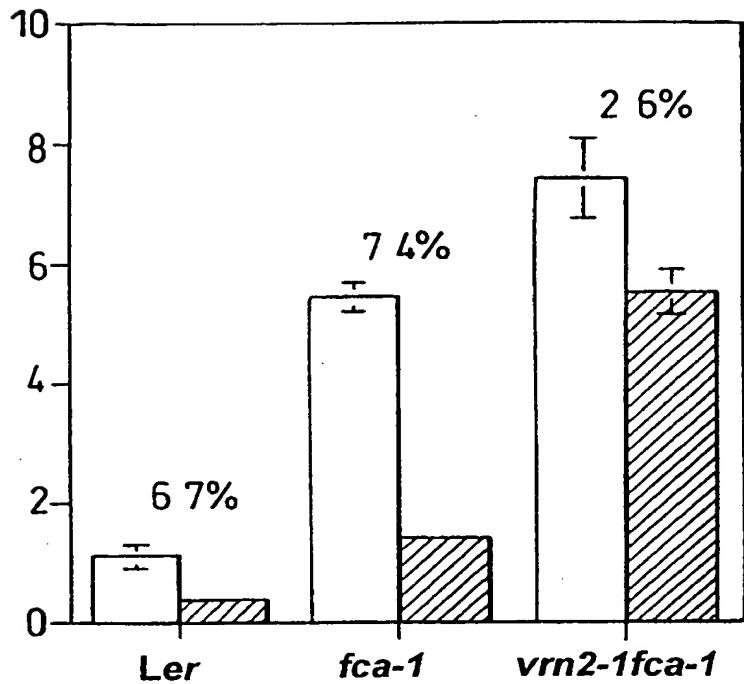
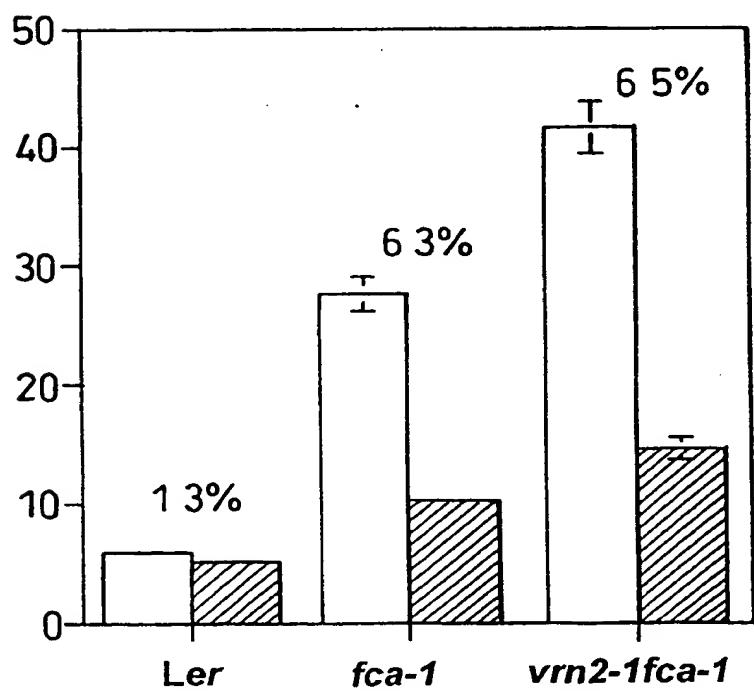
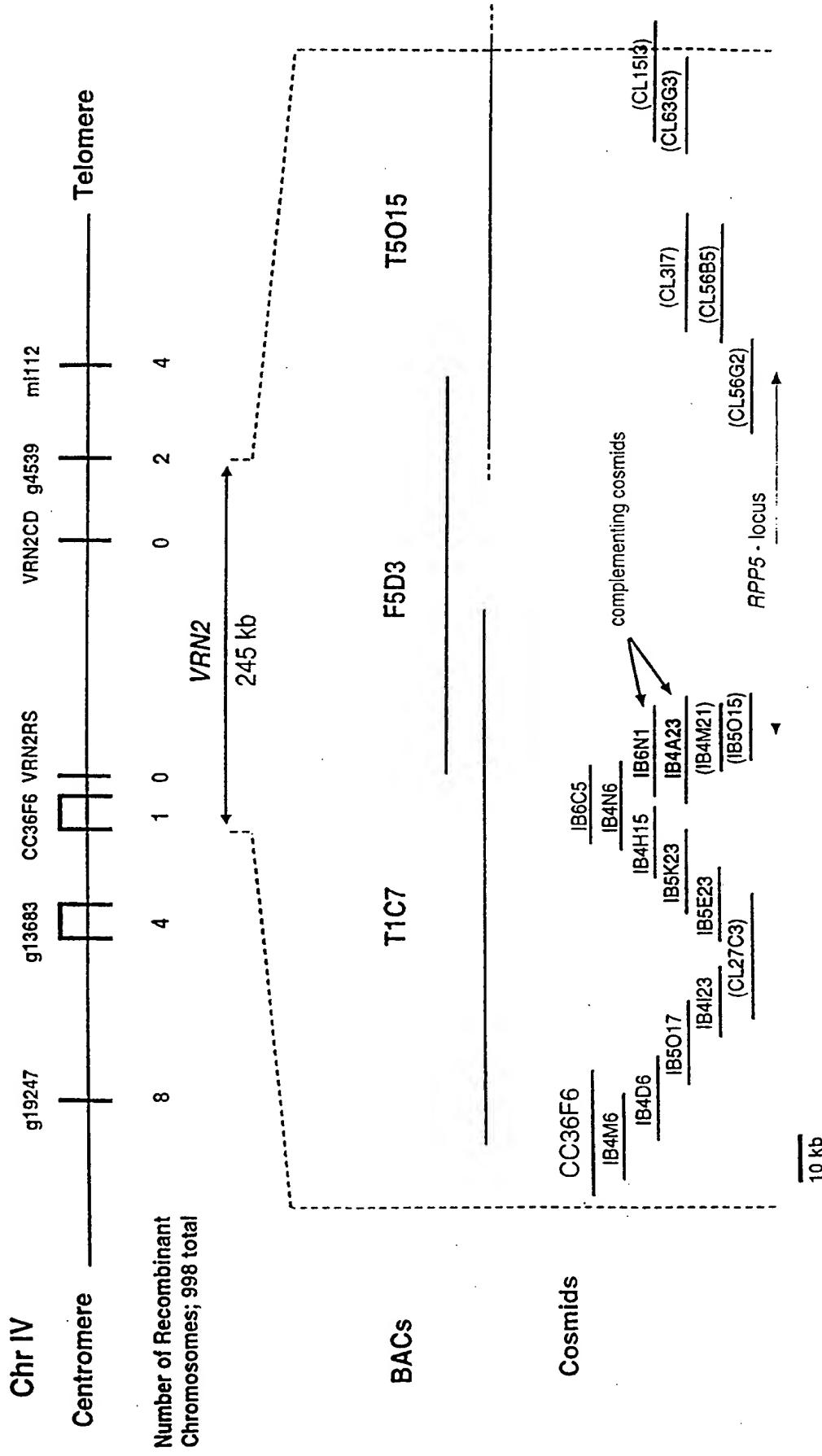
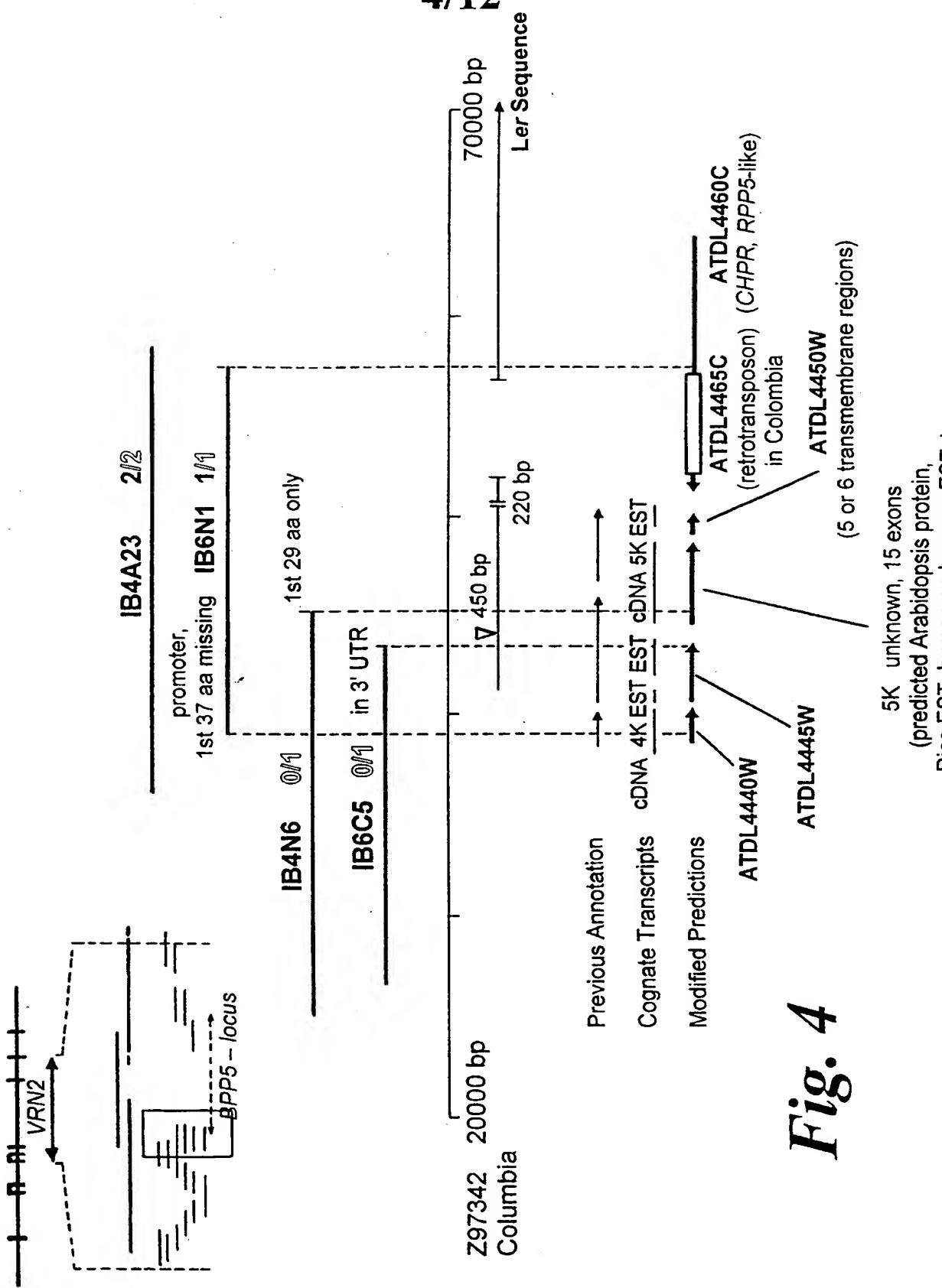
A**B****Fig. 2**

Figure 3

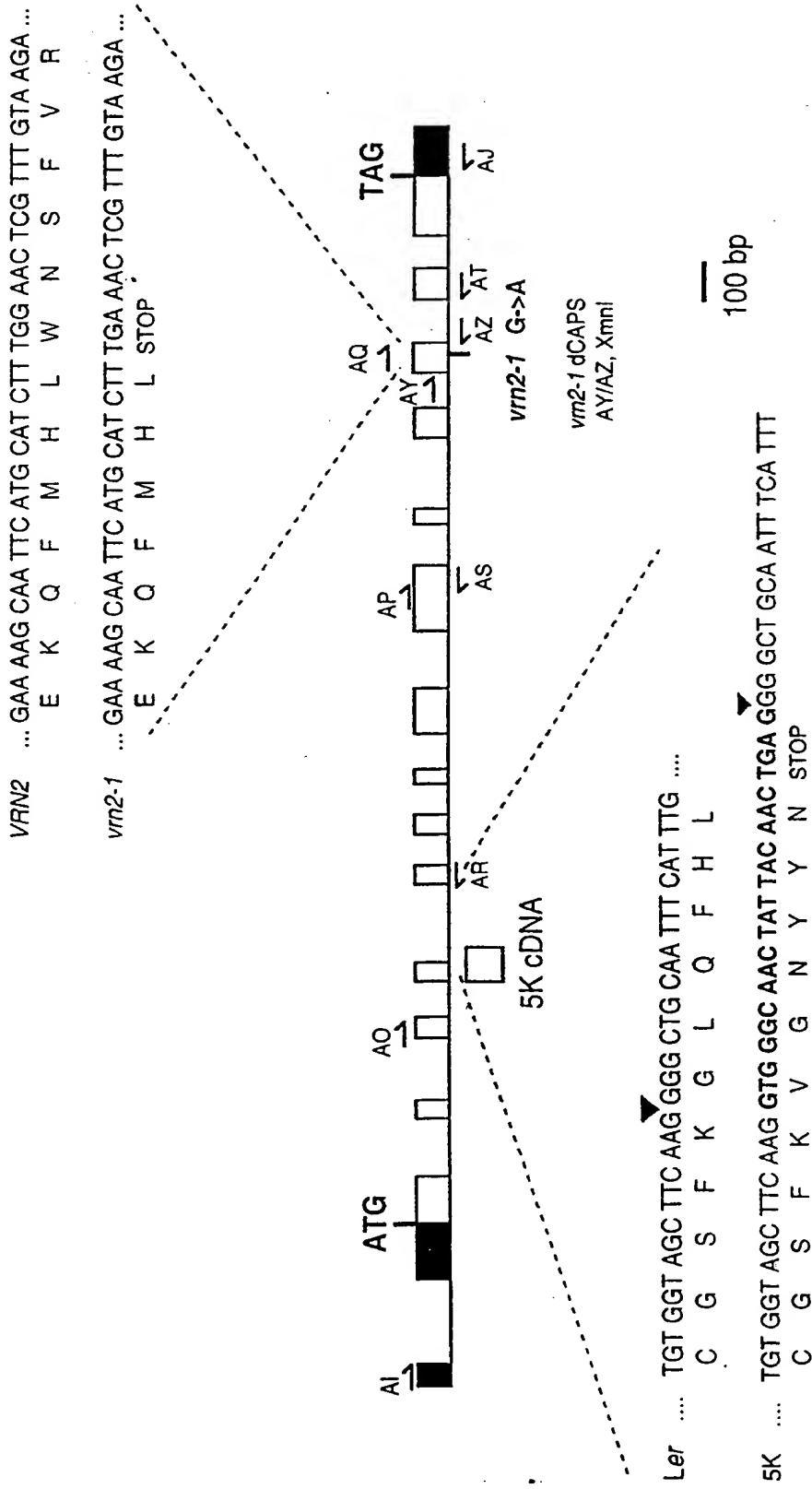


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Figure 5



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CAAGC	5
TCTCTCAATTTCGCTCTCTTACACAGCCAATCGGTGTTTGCAGCTTCAGGCCCTCAATCCAAGACAT	80
TCTATATAAGCATATTGAGAAGAGCGGGTCTAATTGAGTTATCGCTATGACGTAGGGAAATTCT	155
AATTAGGGAGGCCCTCAGAGTTGACTAACTTCATAATCGGCTCTGACGTTGAGTGTAAATTGACAAGA	230
ATGTGTAGGCAGAATTGCGCGGAAATCCTCACCGGAGGAAGTGATTCAACTGATGAGAATCTTGATATAT	305
M C R Q N C R A K S S P E E V I S T D E N L L I Y	25
TGTAAACCTGTCGACTATATAACATCTTACCTTCGCTCTAGGCAACCCATGTTCTCCAAGATGCTTG	380
C K P V R L Y N I F H L R S L G N P S F L P R C L	50
AACTACAAAATTGGAGCAAAGCGAAAAGAAAGTCAAGATCTACTGGGATGGTAGTTCAACTATAAGGATTGT	455
N Y K I G A K R K R K S R S T G M V V F N Y K D C	75
AATAACACATTACAGAAAAGTGAAGTTAGGGAGGATGTTCTGTCATTTGCTCTATGCTATGTTAGCTTC	530
N N T L Q K T E V R E D C S C P F C S M L C G S F	100
AAGGGGCTGCAATTTCATTTGAATTCTCATGATTTATTGAGTTCAAGCTTCAAGAATAACCCAG	605
K G L Q F H L N S S H D L F E F E F K L F E E Y Q	125
ACAGTTAATGTTCTGTTAACTTAATTCTCATATTGAGGAAGAAGGAAAGTGATGACGATAATTGAGGCC	680
T V N V S V K L N S F I F E E E G S D D D K F E P	150
TTCTCTCTGCTCGAACACCTCGTAAGCGGAGACAAAGAGGTGGCAGAAATAACCCAGGAGACTAAAGTATGC	755
F S L C S K P R K R R Q R G G R N N T R R L K V C	175
TTTTTACCGTTGGATTCACCCAGTTAACTAATGGCACAGAAAATGGAATCACCCACTTAATGATGGAAACCGT	830
F L P L D S P S L T N G T E N G I T L L N D G N R	200
GGTTTAGGATATCCCGAGGCAACAGAGCTTGGACAATTGAGATGACCAGCAACATTCCACCGCCATAGCC	905
G L G Y P E A T E L A G Q F E M T S N I P P A I A	225
CACTCTCTGGACGCTGGTGTAAAGTTATATGACAAGCGAAGCTGTGGTCCCTGCTACTAAAGACAAGAAAG	980
H S S L D A G A K V I L T S E A V V P A T K T R K	250
TTATCTGCTGAGCAGAGCTAGAAGCCACCTACTTCTCAGAAACGCCATTCTATCATTCTCACAGAGTC	1055
L S A E R S E A R S H L L L Q K R Q F Y H S H R V	275
CAGCCAAATGGCGCTTGAGCAAGTAATGCTGACCGGGATAGCGAGGATGAAGTCGATGACGATGTGAGATT	1130
Q P M A L E O V M S D R D S E D E V D D D V A D F	300
GAAGATGCCAGATGCTGATGACTTGTGGATGTGAATAAAGATGAAAAGCAATTGATGCATCTTGGAACTCG	1205
E D R Q M L D D F V D V N K D E K Q F M H L W N S	325
TTTGTAAAGAAAACAAGGGTTATAGCAGATGGTCATATCTCTGGCATGTAAGCAAGGATTTCAAGATTTCAGAG	1280
F V R K Q R V I A D G H I S W A C E A F S R F Y E	350
AAAGAGTTGCACCGTTACTCATCACCTCTGCTGTTGGAGATTGTTTGTGATTAACATGGAACCATGGACTT	1355
K E L H R Y S S L F W C W R L F L I K L W N H G L	375
GTCGACTCAGCCACCATCAACAACTGCAATACCATCCTCGAGAATTGCCGTAATGCTCAGACACCACCAACC	1430
V D S A T I N N C N T I L E N C R N S S D T T T T	400
AACACAAACAACAGTGTGGATCGTCCCAGTGACTCAAACACCAACAATAACATTGTTGGATCATCCAAATGAC	1505
N N N N S V D R P S D S N T N N N N I V D H P N D	425
ATAAACAAACAAGAACATGTTGACAACAAGGACAATAACAGCAGAGACAAAGTAATTAAATAGGAAATCTCCGG	1580
I N N K N N V D N K D N N S R D K V I K	445
CTTTTATGATACCGATTATCGGATTGTAACTTATTCTCTTCTTAAAAAATTGTTAGGAGCAAACAAATT	1655
TTATATGTTAGTGTATTCAACTGATTACATTAGTTAAAAAAATGGATTCTGTTATAACT	1722

Figure 6
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Figure 7

fca-1
vrn2-1

GAAAAGCAATTCATGGCATCTT W 323 TGG AACTCGTTTGTAAAGAA
TGA STOP

GAAAAGCAATTCAATGCATCTTGA^{AA}ACTCTTGTAAAGAA
CTTNNNNAAAG
XmnI site

Diagnostic Primer: VRN2-AZ Antisense
(contains a A and G mismatches at positions 5,7)

Upstream Primer: VRN2-AY 5' TGC GTT CATT AAG TAG GCA A CAG AAA AT GG 3'

Product:

PCR Products:

<i>fca-1</i>	GAAAAAGCAATTCAATGCATCTTTGGAAACTCTTC <u>T</u> GTAAAGAA	<i>fca-1</i>	no Xmn1 site	170 bp
<i>vrn2-1</i>	GAAAAAGCAATTCAATGGATCTTGA AA ACTCTTC <u>T</u> GTAAAGAA	<i>vrn2-1</i>	single Xmn1 site	137 bp, 33 bp fragments

SUBSTITUTE SHEET (RULE 26)

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VRN2 Ler	Al163743 Prot	M C R Q N C R A K S S P E E S T D E 20
Rice C72616		- - - - -
At Hyp 2245035		- - - - -
KIA00160		- - - - -
		- - - - -
VRN2 Ler	Al163743 Prot	N L L I Y C K P V R L Y N I F H L R S L 40
Rice C72616		- - - - -
At Hyp 2245035		- - - - -
KIA00160		- - - - -
		- - - - -
VRN2 Ler	Al163743 Prot	N K P G S V K P T Q - - - - -
Rice C72616		- - - - -
At Hyp 2245035		- - - - -
KIA00160		- - - - -
		- - - - -
VRN2 Ler	Al163743 Prot	G N P S F L P R C L N Y K I G A K R K R 60
Rice C72616		- - - - -
At Hyp 2245035		- - - - -
KIA00160		- - - - -
		- - - - -
VRN2 Ler	Al163743 Prot	A V K E S L T T D L Q T R K E K D T P N 484
Rice C72616		- - - - -
At Hyp 2245035		- - - - -
KIA00160		- - - - -
		- - - - -
VRN2 Ler	Al163743 Prot	K S R S T G M V V F N Y K D C N N T L Q 80
Rice C72616		- - - - -
At Hyp 2245035		- - - - -
KIA00160		- - - - -
		- - - - -
VRN2 Ler	Al163743 Prot	E N R Q K L R I F Y Q F L Y N N N T R Q 504
Rice C72616		- - - - -
At Hyp 2245035		- - - - -
KIA00160		- - - - -
		- - - - -
VRN2 Ler	Al163743 Prot	K T E V R E D C S C P F C S M L C G S F 100
Rice C72616		- - - - -
At Hyp 2245035		- - - - -
KIA00160		- - - - -
		- - - - -
VRN2 Ler	Al163743 Prot	Q T E A R D D L H C P W C T L N C R K L 524
Rice C72616		- - - - -
At Hyp 2245035		- - - - -
KIA00160		- - - - -
		- - - - -
VRN2 Ler	Al163743 Prot	K G L Q F H L N S S H D L F E F K L 120
Rice C72616		- - - - -
At Hyp 2245035		- - - - -
KIA00160		- - - - -
		- - - - -

Figure 8a

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Figure 8a continued

VRN2 Ler	AI163743	Prot	Rice C72616	At Hyp 2245035	KIA00160	V N V S V K L N S F I F E E	140
						- - - - -	1
						- - - - -	1
						- - - - -	1
						- - - - -	557
VRN2 Ler	AI163743	Prot	Rice C72616	At Hyp 2245035	KIA00160	D V S I N - - - - -	557
						- - - - -	
						- - - - -	
						- - - - -	
						- - - - -	
VRN2 Ler	AI163743	Prot	Rice C72616	At Hyp 2245035	KIA00160	E G S D D K F E P F S L C S K P R K R	160
						- - - - -	1
						- - - - -	10
						- - - - -	1
						- - - - -	557
VRN2 Ler	AI163743	Prot	Rice C72616	At Hyp 2245035	KIA00160	E G S D D K F E P F S L C S K P R K R	160
						- - - - -	1
						- - - - -	1
						- - - - -	1
						- - - - -	557
VRN2 Ler	AI163743	Prot	Rice C72616	At Hyp 2245035	KIA00160	R Q R G G R N N T R R L K V C F L P L D	180
						- - - - -	1
						- - - - -	30
						- - - - -	1
						- - - - -	557
VRN2 Ler	AI163743	Prot	Rice C72616	At Hyp 2245035	KIA00160	S P S L T N G T E N G I T L L N D G N R	200
						- - - - -	1
						- - - - -	50
						- - - - -	1
						- - - - -	560
VRN2 Ler	AI163743	Prot	Rice C72616	At Hyp 2245035	KIA00160	G L G Y P E A T E S V D Y V Q R E N	220
						- - - - -	17
						- - - - -	70
						- - - - -	1
						- - - - -	580
VRN2 Ler	AI163743	Prot	Rice C72616	At Hyp 2245035	KIA00160	P P A I A H S S L D A G A K V - - -	240
						- - - - -	21
						- - - - -	74
						- - - - -	9
						- - - - -	600

VRN2 Ler	AI163743 Prot	A V V P A T K T R K L S A E R S D A R S 260
Rice C72616	At Hyp 2245035	A M V L Q F A K T R K L S A E R S D M R N 40
At Hyp 2245035	KIA00160	A K V P A E F L S E D G E V E K A T S 93
KIA00160		A K S M S E F L E S E D G E V E K A T S 21
		A K A S V P A E F L S E D G E V E K A T S 620
VRN2 Ler	AI163743 Prot	H L L Q K R Q F Y H S H R V Q P M A 279
Rice C72616	At Hyp 2245035	H R T L L H Q K R Q F Y H S H R V Q P M A 59
At Hyp 2245035	KIA00160	H R Q L P L S G H Q K R Q F Y H S H R V Q P M A 112
KIA00160		H Y S . P L S G H Q K R Q F Y H S H R V Q P M A 41
		H Y S . P L S G H Q K R Q F Y H S H R V Q P M A 639
VRN2 Ler	AI163743 Prot	L E Q V M S D R D S E D E V D : D D V 297
Rice C72616	At Hyp 2245035	L E Q A V M S D R D S E D E V D : D D V 77
At Hyp 2245035	KIA00160	L E Q V M S D R D S E D E V D : D D V 130
KIA00160		L E Q E M - E V D S E D E V D : D D V 61
		L E Q E M - E V D S E D E V D : D D V 655
VRN2 Ler	AI163743 Prot	A D F E D R Q M L D D F V D V N K D : E 316
Rice C72616	At Hyp 2245035	A D F E D R Q M L D D F V D V N K D : E 96
At Hyp 2245035	KIA00160	A D F E D R Q M L D D F V D V N K D : E 149
KIA00160		A H L E S T I Q E F S D V N E D V N E G - E 81
		A H L E K T I Q E F S D V N E D V N E G - E 674
VRN2 Ler	AI163743 Prot	K Q F M H L W N S F V R K Q R V I A D G 336
Rice C72616	At Hyp 2245035	K Q M H M W N S F V R K Q R V I A D G 108
At Hyp 2245035	KIA00160	E R F I K L W N S F V K Q Q R I V A D A 154
KIA00160		K E V M K L W N L H V M K H G F I A D N 101
		K E V M K L W N L H V M K H G F I A D N 694
VRN2 Ler	AI163743 Prot	H I S W A C E A F S R F Y E K E L H R Y 356
Rice C72616	At Hyp 2245035	H I P W A C E A F S R L H L Q E L R S N 108
At Hyp 2245035	KIA00160	H I P W A C E A F S R L H L Q E L R S N 154
KIA00160		H I P W A C E A F S R L H L Q E L R S N 121
		H I P W A C E A F S R L H L Q E L R S N 714

Figure 8a continued

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VRN2 Ler	S S L F W C W R L F L I K L W N H G L V	376
AI163743 Prot	L S L D L C W R Q F M I K Q W D Y G L L	108
Rice C72616	- N L C R N F M L H L V S M H D F N L L	154
At Hyp 2245035	D S A T I N N C N T I L E N C R N S S D	141
KIA00160	S I M S I D K A V T K L I R Y H N I S T T N	733
VRN2 Ler	D R V T M N K C N T I L R E M Q K L E	396
AI163743 Prot	T T T T N N N S V D R P S D S N T N N	108
Rice C72616	D D I N N N N T R T E I T D N M D V V D D	154
At Hyp 2245035	K G E S A S P A N E I T E Q N G T A	181
KIA00160	N N I V D H P N D I N N K N N V D N K D	773
VRN2 Ler	I N G F D K S E I N S K E K A L E T D S V S G	436
AI163743 Prot	N N S R D K V I K	108
Rice C72616	V S K Q S K K Q K L	154
At Hyp 2245035		186
KIA00160		803
VRN2 Ler		445
AI163743 Prot		108
Rice C72616		154
At Hyp 2245035		186
KIA00160		

Figure 8a continued

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111	57	85	69	59	65	29	244
							82
							832
							100
							269
							366
							590
							535
							891
							420
							405
							271

Figure 8b

VRN2 Ler	Sc TFIIA 730931
Al D119 S51478	Sp HYP 1351713
Al D119 S51478	Ce HYP 255942
Al SUP U388946	Ce HYP 2854197
Al HYP 2191171	Ce HYP 304459
Al HYP 3377806	Dm BRCORE-NS-Z3
Sc PEP7 91500	Dm GAGA 729556
Sc TFIIA 730931	Dm ken 3550814
	Hs ATBF-1 976347
	Hs KIA00160
	Hs ZNF142 3123312
	Mm FOG 2252814
	Mm Spalt 1296645
	Rn Roaz 2149792
	Xm ZF1 532083